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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/044,019	BHATTACHARYA ET AL.
	Examiner	Art Unit	
	Aravind K. Moorthy	2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 October 2007</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>10,11,14-16 and 33-52</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>10,11,14-16 and 33-52</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>27 October 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1. This is in response to the arguments filed on 8 October 2007.

2. Claims 10, 11, 14-16 and 33-52 are pending in the application.

3. Claims 10, 11, 14-16 and 33-52 have been rejected.

4. Claims 1-9, 12, 13 and 17-32 have been cancelled.

Response to Arguments

5. Applicant's arguments filed 8 October 2007 have been fully considered but they are not persuasive.

On page 4, the applicant argues that Bsaibes does not disclose "programmatically determining whether the first access control list is functionally equivalent to a second access control list by determining whether each of the first sub-entries in the first access control list is equivalent to or contained by one or more entries of multiple second access control entries in the second access control list".

The examiner respectfully disagrees. Referring first to node A, 700, in FIG. 6, comparing Tim's permissions at 706 with the corresponding permissions in FIG. 5, it will be noted that Tim permission is modified in FIG. 6 and the write permission (w) is deleted. Similarly, Catherine is modified and granted execute permission in node A of FIG. 6 whereas previously in node A (FIG. 5), she only had read and write permission.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 10, 11, 33-41 and 45-48 are rejected under 35 U.S.C. 102(b) as being anticipated

by Bsaibes et al U.S. Patent No. 5,701,458.

As to claim 10, Bsaibes et al a method as recited, wherein identifying first sub-entries in a

first access control list comprises:

identifying a dimensional range and a policy action for each entry in the

first access control list [column 5 line 65 to column 9 line 9];

identifying all overlapping dimensional ranges in the first access control

list, each overlapping dimensional range corresponding to where the dimensional

ranges of entries in the first access control list overlap [column 5 line 65 to

column 9 line 9];

identifying all non-overlapping dimensional ranges in the first access

control list, each of the non-overlapping dimensional ranges corresponding to

dimensional ranges of entries in the first access control list that do not overlap

dimensional ranges of other entries in the first access control list [column 5 line

65 to column 9 line 9];

identifying a policy action for each identified overlapping dimensional

range in the first access control list [column 5 line 65 to column 9 line 9]; and

identifying a policy action for each identified non-overlapping dimensional range of the first access control list [column 5 line 65 to column 9 line 9].

As to claims 11, 41 and 49, Bsaibes et al discloses as recited, wherein identifying second sub-entries in a second access control list comprises:

identifying a dimensional range and a policy action for each entry in the second access control list [column 5 line 65 to column 9 line 9];

identifying all overlapping dimensional ranges in the second access control list, each overlapping dimensional range corresponding to where the dimensional ranges of entries in the second access control list overlap [column 5 line 65 to column 9 line 9];

identifying all non-overlapping dimensional ranges in the second access control list, each of the non-overlapping dimensional ranges corresponding to dimensional ranges of entries in the second access control list that do not overlap dimensional ranges of other entries in the second access control list [column 5 line 65 to column 9 line 9];

identifying a policy action for each identified overlapping dimensional range of the second access control list [column 5 line 65 to column 9 line 9]; and

identifying a policy action for each identified non-overlapping dimensional range of the second access control list [column 5 line 65 to column 9 line 9].

As to claim 33, Bsaibes et al discloses a method of comparing access control lists to configure a security policy on a network, the method comprising the computer-implemented steps of:

identifying first sub-entries in a first access control list, wherein the first access control list comprises multiple first access control entries, and wherein the first sub-entries identified from the first access control list comprise (i) disjoint entries of the first entries or (ii) overlapping sections identified from the first entries or (iii) non-overlapping sections identified from the first entries [column 5 line 65 to column 9 line 9]; and

programmatically determining whether the first access control list is functionally equivalent to a second access control list by determining whether each of the first sub-entries in the first access control list is equivalent to or contained by one or more entries of multiple second access control entries the second access control list [column 5 line 65 to column 9 line 9].

As to claims 34, 38 and 46, Bsaibes et al discloses determining that the first access control list is functionally equivalent to the second access control list in response to a determination that each of the first sub-entries is equivalent to or contained by one or more entries of the second access control list [column 5 line 65 to column 9 line 9].

As to claims 35, 39 and 47, Bsaibes et al discloses a method as recited, further comprising:

identifying second sub-entries in the second access control list, wherein the second sub-entries identified from the second access control list comprise (i) disjoint entries of the second entries or (ii) overlapping sections identified from the second entries or (iii) non-overlapping sections identified from the second entries [column 6 line 18 to column 7 line 22]; and

wherein determining whether each of the first sub-entry in the first access control list is equivalent to or contained by one or more entries of the second access control list includes determining whether the each of the first sub-entries in the first access control list is equivalent to or contained by one or more of the second sub-entries identified from the second control list [column 6 line 18 to column 7 line 22].

As to claim 36, Bsaibes et al discloses a computer readable medium for comparing access control lists to configure a security policy on a network, the computer readable medium carrying instructions for performing the steps of:

identifying first sub-entries in a first access control list, wherein the first access control list comprises multiple first access control entries, and wherein the first sub-entries identified from the first access control list comprise (i) disjoint entries of the first entries or (ii) overlapping sections identified from the first entries or (iii) non-overlapping sections identified from the first entries [column 5 line 65 to column 9 line 9]; and

programmatically determining whether the first access control list is

functionally equivalent to a second access control list by determining whether

each of the first sub-entries in the first access control list is equivalent to or

contained by one or more entries of multiple second access control entries in the

second access control list [column 5 line 65 to column 9 line 9].

As to claim 37, Bsaibes et al discloses a policy server communicatively coupled to

security devices in a network to configure a security policy on a network, the policy server

comprising:

a processor [column 5, lines 51-67];

a network interface that communicatively couples the processor to the

network to receive flows of packets therefrom [column 5, lines 51-67];

a memory [column 5, lines 51-67]; and

sequences of instructions in the memory which, when executed by the

processor, cause the processor to carry out the steps of:

identifying first sub-entries in a first access control list, wherein

the first access control list comprises multiple first access control entries,

and wherein the first sub-entries identified from the first access control list

comprise (i) disjoint entries of the first entries or (ii) overlapping sections

identified from the first entries or (iii) non-overlapping sections identified

from the first entries [column 5 line 65 to column 9 line 9]; and

programmatically determining whether the first access control list

is functionally equivalent to a second access control list by determining

whether each of the first sub-entries in the first access control list is equivalent to or contained by one or more entries of multiple second access control entries in the second access control list [column 5 line 65 to column 9 line 9].

As to claims 40 and 48, Bsaibes et al discloses a policy server as recited, wherein the instructions for performing identifying first sub-entries in a first access control list comprise:

instructions for performing identifying a dimensional range and a policy action for each entry in the second access control list [column 6 line 18 to column 7 line 22];

instructions for performing identifying all overlapping dimensional ranges in the second access control list, each overlapping dimensional range corresponding to where the dimensional ranges of entries in the second access control list overlap [column 6 line 18 to column 7 line 22];

instructions for performing identifying all non-overlapping dimensional ranges in the second access control list, each of the non-overlapping dimensional ranges corresponding to dimensional ranges of entries in the second access control list that do not overlap dimensional ranges of other entries in the second access control list [column 6 line 18 to column 7 line 22];

instructions for performing identifying a policy action for each identified overlapping dimensional range in the second access control list [column 6 line 18 to column 7 line 22]; and

instructions for performing identifying a policy action for each identified non-overlapping dimensional range of the second access control list [column 6 line 18 to column 7 line 22].

As to claim 45, Bsaibes et al discloses an apparatus for comparing access control lists to configure a security policy on a network, the apparatus comprising:

means for identifying first sub-entries in a first access control list, wherein the first access control list comprises multiple first access control entries, and wherein the first sub-entries identified from the first access control list comprise (i) disjoint entries of the first entries or (ii) overlapping sections identified from the first entries or (iii) non-overlapping sections identified from the first entries [column 5 line 65 to column 9 line 9]; and

means for programmatically determining whether the first access control list is functionally equivalent to a second access control list by determining whether each of the first sub-entries in the first access control list is equivalent to or contained by one or more entries of multiple second access control entries the second access control list [column 5 line 65 to column 9 line 9].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 14, 42 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bsaibes et al U.S. Patent No. 5,701,458 as applied to claims 33, 37 and 45 above, and further in view of Brawn et al U.S. Patent No. 7,020,718 B2.

As to claims 14, 42 and 50, Bsaibes et al does not teach that identifying a dimensional range and a policy action for each entry in the first access control list includes identifying a source address range and a destination address range for communication packets specified by each of the entries in the first access control list.

Brawn et al teaches identifying a source address range and a destination address range for communication packets specified by each of the entries in the first access control list [column 8 line 41 to column 9 line 2].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Bsaibes et al so that a dimensional range and a policy action would have been identified for each entry in the first access control list that would have included identifying a source address range and a destination address range for communication packets specified by each of the entries in the first access control list.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Bsaibes et al by the teaching of Brawn et al because an advantage includes providing a discontiguous address plan that allows thousands of discrete, different sized, and seemingly irregularly spaced address ranges to be accessed and identified by a small number of address and mask combinations. Another advantage includes providing an enterprise having a large complex network with a discontiguous network address plan configured to optimize for route advertisement, ACL entries, firewall configurations, and multiple network policies [column 6, lines 27-35].

8. **Claims 15, 43 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bsaibes et al U.S. Patent No. 5,701,458 as applied to claims 33, 37 and 45 above, and further in view of Mate et al U.S. Patent No. 7,020,718 B2.**

As to claims 15, 43 and 51, Bsaibes et al does not teach that identifying a dimensional range and a policy action for each entry in the first access control list includes identifying a source port range and a destination port range for communication packets specified by each of the entries in the first access control list.

Mate et al teaches identifying a source port range and a destination port range for communication packets specified by each of the entries in the first access control list [column 11, lines 4-19].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Bsaibes et al so that a dimensional range and a policy action would have been identified for each entry in the first access control list that would

have included identifying a source port range and a destination port range for communication packets specified by each of the entries in the first access control list.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Bsaibes et al by the teaching of Mate et al because it provides a method and system having fast search capabilities for classifying a plurality of types of data traffic and route lookup [column 3, lines 14-16].

9. **Claims 16, 44 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bsaibes et al U.S. Patent No. 5,701,458 as applied to claims 33, 37 and 45 above, and further in view of Banginwar U.S. Patent No. 7,020,718 B2.**

As to claims 16, 44 and 52, Bsaibes et al does not teach identifying a dimensional range and a policy action for each entry in the first access control list includes identifying a communication protocol for communication packets specified by each of the entries in the first access control list.

Banginwar teaches identifying a communication protocol for communication packets specified by each of the entries in the first access control list [column 3, lines 18-46].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Bsaibes et al so that a dimensional range and a policy action would have been identified for each entry in the first access control list that would have included identifying a communication protocol for communication packets specified by each of the entries in the first access control list.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Bsaibes et al by the teaching of Banginwar because it

enables a policy manage to communicate with the many devices connected to it [column 3, lines 47-54].

Conclusion

10.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aravind K. Moorthy whose telephone number is 571-272-3793. The examiner can normally be reached on Monday-Friday, 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Aravind K Moorthy
December 18, 2007

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